

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant(s): **Turner, Jr. et al.** Prior Group Art Unit: **1652**

Application No.: **Unknown** Prior Application Examiner:
Parent Application Serial Number **10/116,326** **M. Monshipouri**

Filed: **Concurrently Herewith** Attorney Docket No.: **LEX-0484-USA**

Title: **Novel Human Kinases and Polynucleotides
Encoding the Same**

REQUEST TO MAKE PRIOR ART FROM PREVIOUS APPLICATION OF RECORD

Assistant Commissioner for Patents
Alexandria, VA 22313-1450

Sir:

The present paper constitutes Applicants' compliance with their duty of disclosure under 37 C.F.R. § 1.56. Please make all prior art of record in parent application Serial No. 10/116,326, filed April 4, 2002, of record in the present case, including that cited by the Office and Applicants. As a courtesy, copies of the Form PTO-1449s from the prior application are included herewith as **Exhibit A**.

Respectfully submitted,

March 17, 2004

Date



David W. Hibler
Agent for Applicants

Reg. No. 41,071

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| Application Number | 10/116,326 |
| Filing Date | Apr 4, 2002 |
| First Named Inventor | Turner |
| Group Art Unit | 1645 |
| Examiner Name | Not Yet Assigned |

Sheet

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of

3

Attorney Docket Number

LEX-0332-USA

U.S. PATENT DOCUMENTS

| Examiner Initials* | Cite No. ¹ | U.S. Patent Document | | Name of Patentee or Applicant of Cited Document | Date of Publication of cited Document MM-DD-YYYY | Pages, Columns, Lines, Where Relevant Passages or Relevant Figures Appear |
|--------------------|-----------------------|----------------------|-----------------------------------|---|--|---|
| | | Number | Kind Code ² (if known) | | | |
| AA | 4,215,051 | | | Schroeder et al | 07/29/80 | |
| AB | 4,376,110 | | | David et al | 03/08/83 | |
| AC | 4,594,595 | | | Struckman | 06/10/86 | |
| AD | 4,631,211 | | | Houghten | 12/23/86 | |
| AE | 4,689,405 | | | Frank et al | 08/25/87 | |
| AF | 4,713,326 | | | Dattagupta et al | 12/15/87 | |
| AG | 4,873,191 | | | Wagner et al | 10/10/89 | |
| AH | 4,946,778 | | | Ladner et al | 08/07/90 | |
| AI | 5,252,743 | | | Barrett et al | 10/12/93 | |
| AJ | 5,272,057 | | | Smulson et al | 12/21/93 | |
| AK | 5,424,186 | | | Fodor et al | 06/13/95 | |
| AL | 5,445,934 | | | Fodor et al | 08/29/95 | |
| AM | 5,459,127 | | | Felgner et al | 10/17/95 | |
| AN | 5,556,752 | | | Lockhart et al | 09/17/96 | |
| AO | 5,700,637 | | | Southern | 12/23/97 | |
| AP | 5,723,323 | | | Kauffman et al | 03/03/98 | |
| AQ | 5,744,305 | | | Fodor et al | 04/28/98 | |
| AR | 5,756,289 | | | Hoekstra | 05/26/98 | |
| AS | 5,817,479 | | | Au-Young et al | 10/06/98 | |
| AT | 5,830,721 | | | Stemmer et al | 11/03/98 | |
| AU | 5,837,458 | | | Minshull et al | 11/17/98 | |
| AV | 5,869,336 | | | Meyer et al. | 02/09/99 | |
| AW | 5,877,397 | | | Lonberg et al | 03/02/99 | |
| AX | 5,948,767 | | | Scheule et al. | 09/07/99 | |
| AY | 6,075,181 | | | Kucherlapati et al | 06/13/00 | |
| AZ | 6,110,490 | | | Thierry | 08/29/00 | |
| BA | 6,114,598 | | | Kucherlapati et al | 09/05/00 | |
| BB | 6,117,679 | | | Stemmer | 09/12/00 | |
| BC | 6,150,584 | | | Kucherlapati et al. | 11/21/00 | |
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| INFORMATION DISCLOSURE STATEMENT BY APPLICANT <i>(use as many sheets as necessary)</i> | | | | Application Number | 10/116,326 |
| | | | | Filing Date | Apr 4, 2002 |
| | | | | First Named Inventor | Turner |
| | | | | Group Art Unit | 1645 |
| | | | | Examiner Name | Not Yet Assigned |
| Sheet | 2 | of | 3 | Attorney Docket Number | LEX-0332-USA |

| OTHER PRIOR ART - NON PATENT LITERATURE DOCUMENTS | | | | | |
|--|-----------------------|--|--|--|--|
| Examiner Initials* | Cite No. ¹ | Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published. | | | |
| | BD | Bird et al, 1988, "Single-Chain Antigen-Binding Proteins", Science 242:423-426. | | | |
| | BE | Bitter et al, 1987, "Expression and Secretion Vectors for Yeast", Methods in Enzymology 153:516-544. | | | |
| | BF | Colbere-Garapin et al, 1981, "A New Dominant Hybrid Selective Marker for Higher Eukaryotic Cells", J. Mol. Biol. 150:1-14. | | | |
| | BG | Cote et al, 1983, "Generation of human monoclonal antibodies reactive with cellular antigens", PNAS 80:2026-2030. | | | |
| | BH | Gautier et al, 1987, " α -DNA IV: α -anomeric and β -anomeric tetrathymidylates covalently linked to intercalating oxazolopyridocarbazole. Synthesis, physiochemical properties and poly (rA) binding", Nucleic Acids Research 15(16):6625-6641. | | | |
| | BI | Gordon, 1989, "Transgenic Animals", International Review of Cytology, 115:171-229. | | | |
| | BJ | Greenspan et al, 1993, "Idiotypes: structure and immunogenicity", FASEB Journal 7:437-444. | | | |
| | BK | Gu et al, 1994, "Deletion of a DNA Polymerase β Gene Segment in T Cells Using Cell Type-Specific Gene Targeting", Science 265:103-106. | | | |
| | BL | Huse et al, 1989, "Generation of a Large Combinatorial Library of the Immunoglobulin Repertoire in Phage Lambda", Science 246:1275-1281. | | | |
| | BM | Huston et al, 1988, "Protein engineering of antibody binding sites: Recovery of specific activity in an anti-digoxin single-chain Fv analogue produced in Escherichia coli", Proc. Natl. Acad. Sci. USA 85:5879-5883. | | | |
| | BN | Inoue et al, 1987, "Sequence-dependent hydrolysis of RNA using modified oligonucleotide splints and R Nase H", FEBS Letters 215(2):327-330. | | | |
| | BO | Inoue et al, 1987, "Synthesis and hybridization studies on two complementary nona(2'-O-methyl)ribonucleotides", Nucleic Acids Research 15(15):6131-6149. | | | |
| | BP | Inouye & Inouye, 1985, "Up-promoter mutations in the lpp gene of Escherichia coli", Nucleic Acids Research 13(9):3101-3110. | | | |
| | BQ | Janknecht et al, 1991, "Rapid and efficient purification of native histidine-tagged protein expressed by recombinant vaccinia virus", PNAS 88:8972-8976. | | | |
| | BR | Kohler & Milstein, 1975, "Continuous cultures of fused cells secreting antibody of predefined specificity", Nature 256:495-497. | | | |
| | BS | Lakso et al, 1992, "Targeted oncogene activation by site-specific recombination in transgenic mice", Proc. Natl. Acad. Sci. USA 89:6232-6236. | | | |
| | BT | Lavitrano et al, 1989, "Sperm Cells as Vectors for Introducing Foreign DNA into Eggs: Genetic Transformation of Mice", Cell 57:717-723. | | | |
| | BU | Lo, 1983, "Transformation by Iontophoretic Microinjection of DNA: Multiple Integrations without Tandem Insertions", Mol. & Cell. Biology 3(10):1803-1814. | | | |
| | BV | Logan et al, 1984, "Adenovirus tripartite leader sequence enhances translation of mRNAs late after infection", Proc. Natl. Acad. Sci. USA 81:3655-3659. | | | |
| | BW | Lowy et al, 1980, "Isolation of Transforming DNA: Cloning the Hamster apt Gene", Cell 22:817-823. | | | |
| | BX | Morrison et al, 1984, "Chimeric human antibody molecules: Mouse antigen-binding domains with human constant region domains", Proc. Natl. Acad. Sci. USA 81:6851-6855. | | | |
| | BY | Mulligan & Berg, 1981, "Selection for animal cells that express the Escherichia coli gene coding for xanthine-guanine phosphoribosyltransferase", Proc. Natl. Acad. Sci. USA 78(4):2072-2076. | | | |
| | BZ | Neuberger et al, 1984, "Recombinant antibodies possessing novel effector functions", Nature 312:604-608. | | | |
| | CA | Nisonoff, 1991, "Idiotypes: Concepts and Applications", J. of Immunology 147:2429-2438. | | | |
| | CB | O'Hare et al, 1981, "Transformation of mouse fibroblasts to methotrexate resistance by a recombinant plasmid expressing a prokaryotic dihydrofolate reductase", Proc. Natl. Acad. Sci. USA 78(3):1527-1531. | | | |

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| | | | | Application Number | 10/116,326 |
| | | | | Filing Date | Apr 4, 2002 |
| | | | | First Named Inventor | Turner |
| | | | | Group Art Unit | 1645 |
| | | | | Examiner Name | Not Yet Assigned |
| Sheet | 3 | of | 3 | Attorney Docket Number | LEX-0332-USA |

| OTHER PRIOR ART - NON PATENT LITERATURE DOCUMENTS | | |
|---|-----------------------|---|
| Examiner Initials* | Cite No. ¹ | Include name of the author (in CAPITAL LETTERS), title of the article (when appropriate), title of the item (book, magazine, journal, serial, symposium, catalog, etc.), date, page(s), volume-issue number(s), publisher, city and/or country where published. |
| | CC | Ruther et al, 1983, "Easy identification of cDNA clones", EMBO Journal 2(10):1791-1794. |
| | CD | Santerre et al, 1984, "Expression of prokaryotic genes for hygromycin B and G418 resistance as dominant-selection markers in mouse L cells", Gene 30:147-156. |
| | CE | Sarin et al, 1988, "Inhibition of acquired immunodeficiency syndrome virus by oligodeoxynucleoside methylphosphonates", Proc. Natl. Acad. Sci. USA 85:7448-7451. |
| | CF | Smith et al, 1983, "Molecular Engineering of the Autographa californica Nuclear Polyhedrosis Virus Genome: Deletion Mutations within the Polyhedrin Gene", J. Virol. 46(2):584-593. |
| | CG | Stein et al, 1988, "Physiochemical properties of phosphorothioate oligodeoxynucleotides", Nucleic Acids Research 16(8):3209-3221. |
| | CH | Szybalska & Szybalski, 1962, "Genetics of Human Cell Lines, IV. DNA-Mediated Heritable Transformation of a Biochemical Trait", Proc. Natl. Acad. Sci. USA 48:2026-2034. |
| | CI | Takeda et al, 1985, "Construction of chimaeric processed immunoglobulin genes containing mouse variable and human constant region sequences", Nature 314:452-454. |
| | CJ | Thompson et al, 1989, "Germ Line Transmission and Expression of a Corrected HPRT Gene Produced by Gene Targeting in Embryonic Stem Cells", Cell 56:313-321. |
| | CK | Van Der Putten et al, 1985, "Efficient insertion of genes into the mouse germ line via retroviral vectors", Proc. Natl. Acad. Sci. USA 82:6148-6152. |
| | CL | Van Heeke et al, 1989, "Expression of Human Asparagine Synthetase in Escherichia coli", J. Biol. Chemistry 264(10):5503-5509. |
| | CM | Ward et al, 1989, "Binding activities of a repertoire of single immunoglobulin variable domains secreted from Escherichia coli", Nature 341:544-546. |
| | CN | Wigler et al, 1977, "Transfer of Purified Herpes Virus Thymidine Kinase Gene to Cultured Mouse Cells", Cell 11:223-232. |
| | CO | Wigler et al, 1980, "Transformation of mammalian cells with an amplifiable dominant-acting gene", Proc. Natl. Acad. Sci. USA 77(6):3567-3570. |
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| | CP | NAGASE et al. Prediction of the coding sequences of unidentified Human Genes. XX. The complete sequences of 100 new cDNA Clones from Brain which code for Large Proteins in vitro. DNA Res. April 2001, Vol. 8, pages 85-95, entire document | | | | |
| | CQ | Database SPTREMBL, No. O60843, STANCHI et al., 'Putative Serine/threonine kinase (fragment)', NCBI_TaxID=9606,01 August 1998, see the attached alignment to SEQ ID NO:2 and 4. | | | | |
| | CR | International Search Report | | | | |
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| FOREIGN PATENT DOCUMENTS | | | | | | | |
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